agitating the mixture to produce a substantially uniform mixture; and

allowing the mixture to set and become annealed to a hard workable structure.

- 8. A method according to claim 7, wherein hydroxyapatite crystals are combined in said combining step and
 said orthophosphoric acid crystals, calcium carbonate,
 and hydroxyapatite crystals are brought together in a
 uniform composition, prior to combining with said water.
- 9. A method according to claim 8, wherein said orthophosphoric acide crystals are present in 6-15 parts by weight, saaid calcium carbonate is present in from

about 6-15 parts by weight, and hydroxyapatite crystals are present in from about 0.2-10 parts by weight.

- 10. A method according to claim 7, wherein said annealing occurs in situ in bone.
- 11. A method according to claim 7, wherein calcium fluoride is inclined in said mixture during said combining in an amount to displace at least 10% of the hydroxyl groups of hydroxyapatite.
- 12. A method according to claim 6, wherein 0.2-2 parts by weight of collagen is combined in said combining step.

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